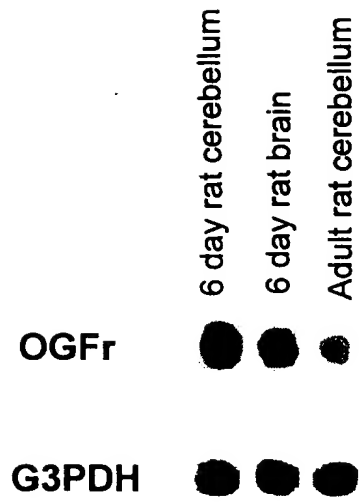


16085 U.S. PTO  
100605



**Figure 1**

### Figure 8B

[illegible]

[illegible]

## Figure 8B

1 90  
GCCGAGCATGGACGCCGACTCGACTCCACCTGGGAGGAGGACGAGGAGATCGGAGGACCGGAGGACGAGGACTGCGAGGACGG  
MetAspAspProAspCysAspSerThrTrpGluGluAspGluGluAspAlaGluAspAlaGluAspGluAspCysGluAspGly 90

29 180  
CGAGGCCGCGGCGGAGGACGCGGACGCGAGGCGGAGGAGTGGAGGAGCGCGGGCGGGCGGCCAGCTCGTTCCAGTC  
GluAlaAlaGlyAlaArgAspAlaAspAlaGlyAspGluAspGluSerGluGluProArgAlaAlaArgProSerSerPheGlnSer 180

59 270  
CAGAATGACAGGGTCCAGAACTGGCGAGCCACGAGGACATGTGTAGGTATCGGCACAACATATCCGGATCTGTGTGGAACGAGACTGCAA  
ArgMetThrGlySerArgAsnTrpArgAlaThrArgAspMetCysArgTyrArgHisAsnTyrProAspLeuValGluArgAspCysAsn 270

89 360  
TGGGGACACGCCAAACCTGAGTTTCTACAGAAATGAGATCCGCTTCTGCCCCAACGGCTGTTTCATTGAGGACATTTCTCAGAACTGGAC  
GlyAspThrProAsnLeuSerPheTyrArgAsnGluIleArgPheLeuProAsnGlyCysPheIleGluAspIleLeuGlnAsnTrpThr 360

119 450  
GGACAATATGACCTCTTGGAGACAATCACTCCTACATCCAGTGGCTGTTTCTCTGCGAGAACCAGGAGTGAAGTGGCATGCCAAGCC  
AspAsnTyrAspLeuLeuGluAspAsnHisSerTyrIleGlnTrpLeuPheProLeuArgGluProGlyValAsnTrpHisAlaLysPro 450

149 540  
CCTCAGCTCAGGGAGGTCGAGGTGTTTAAAGCTCCAGGAGATCCAGGAGCGGCTGTCCGGGCTTACGAGCTCATGTGGGCTTCTA  
LeuThrLeuArgGluValGluValPheLysSerSerGlnGluIleGlnGluArgLeuValArgAlaTyrGluLeuMetLeuGlyPheTyr 540

179 630  
CGGGATCCGGCTGGAGGACCGAGGCACGGGCGACGGTGGGCGGAGCACAGAACTACAGAACGCGCTTCCAGAACCTGAACCTGGCGCAGCCA  
GlyIleArgLeuGluAspArgGlyThrGlyThrValGlyArgAlaGlnAsnTyrGlnLysArgPheGlnAsnLeuAsnTrpArgSerHis 630

209 720  
CAACAACCTCCGATCACAGCATCCTCAAGTCGCGGTGTGAGTCCAGGCTCGAGCACTTCCAGGCGCCACTGGTCCGCTTCTTCCCTGGA  
AsnAsnLeuArgIleThrArgIleLeuLysSerProCysGluLeuSerLeuGluHisPheGlnAlaProLeuValArgPhePheLeuGlu 720

239 810  
GGAGACGCTGTCGCGCGGAGCTGCCGGGGGTGCGGCAGAGTCCCTGGACTTCTCATGTTCCGCTGCGCTGCCGACACCCAGCGCCG  
GluThrLeuValArgArgGluLeuProGlyValArgGlnSerAlaLeuAspTyrPheMetPheAlaValArgCysArgHisGlnArgArg 810

269 900  
CCAGCTGGTGCACTTCGCTGGAGCACTTCCGGCCCCGCTGCAAGTTCGTCGGGGGCCCCCAAGACAAAGTCCGGAGGTTCAAGCCCCAG  
GlnLeuValHisPheAlaTrpGluHisPheArgProArgCysLysPheValTrpGlyProGlnAspLysLeuArgArgPheLysProSer 900

299 990  
CTCTCTGCCGCTCCGCTCGAGGGCTCCAGGAAGTGGAGGAGGAAGGAAGGCCCCGGGGACCCCGACCCAGGCGCCAGCCAGGGTCCG  
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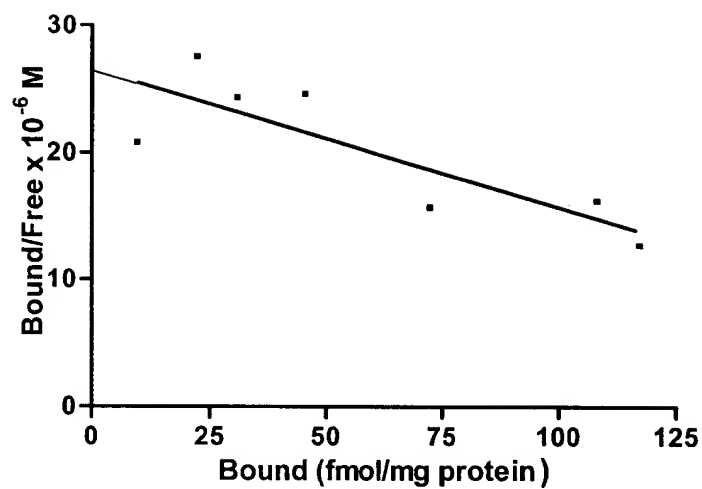
329 1080  
GACCTGTGAGCCAGACATAGCAAGGTGGGGGCGAGGTGGACGAGGGGGGCCAGCCAGGAGCGTGGAGCCCCAGGATGCGGGACCCCT  
ThrCysGluProGluHisSerLysGlyGlyArgValAspGluGlyProGlnProArgSerValGluProGlnAspAlaGlyProLeu 1080

359 1170  
GGAGAGGAGCCAGGGGATGAGGCGGGGGCCAGGGGAAGATAGGCGGGAGCCCTTAAGCCCCAAAGAGACGAAGAGAGGAGGCTGGA  
GluArgSerGlnGlyAspGluAlaGlyGlyHisGlyGluAspArgProGluProLeuSerProLysGluSerLysArgLysLeuGlu 1170

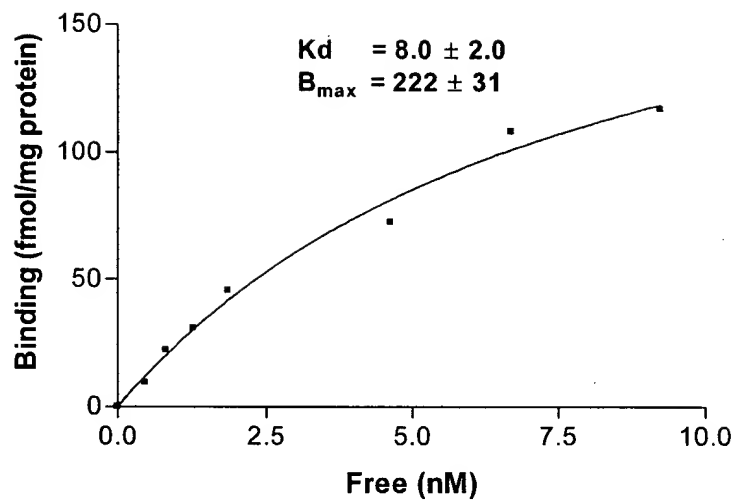
Figure 8A

A

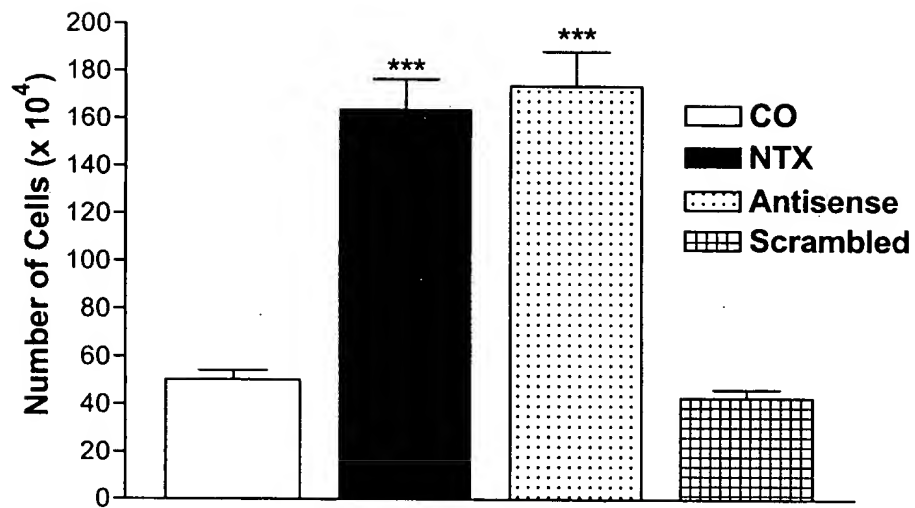
A



**Figure 7B**



**Figure 7A**



**Figure 6**



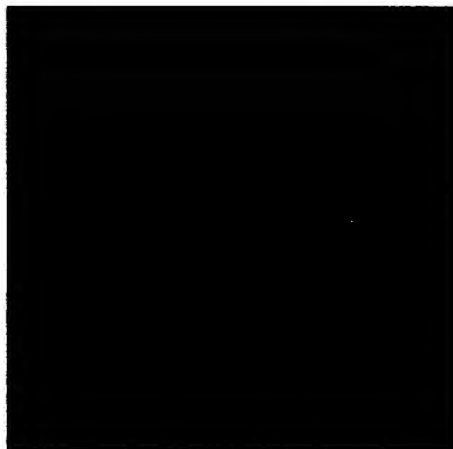
**Figure 5A**

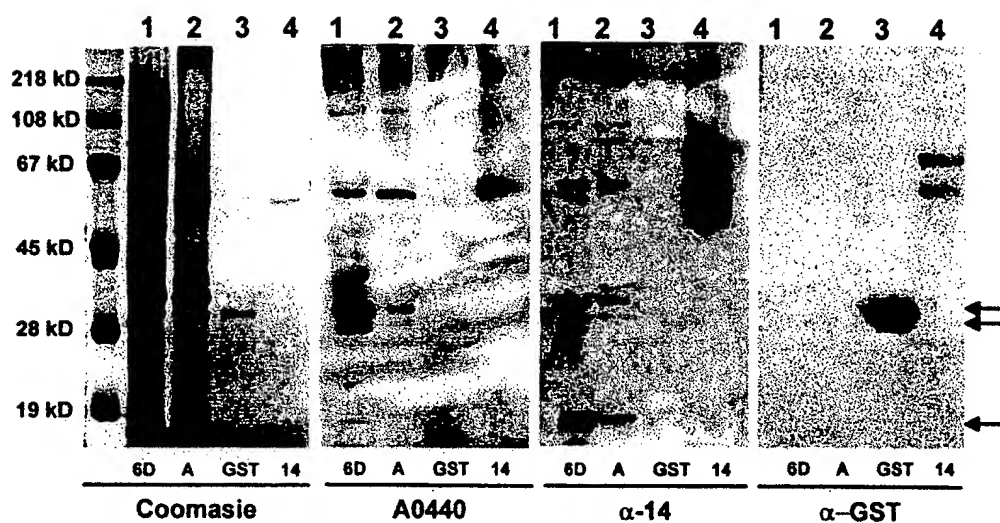


**Figure 5B**

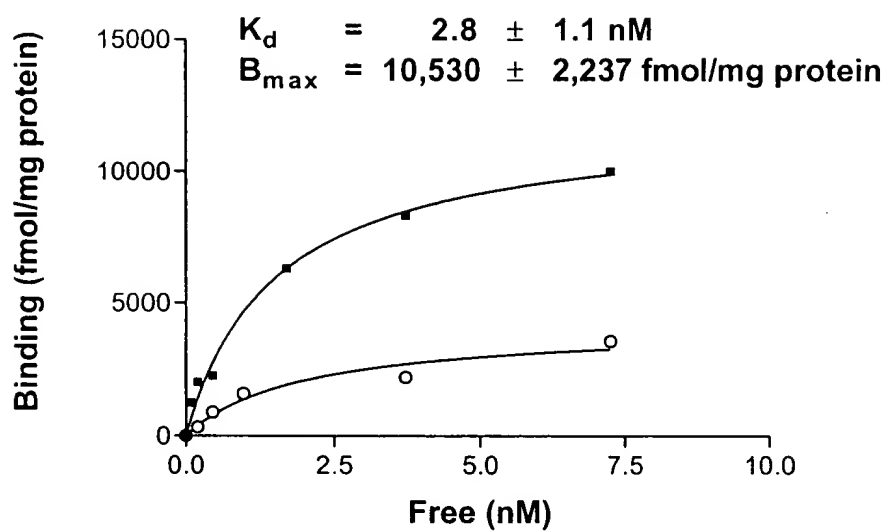


**Figure 5C**





**Figure 4A**   **Figure 4B**   **Figure 4C**   **Figure 4D**



**Figure 3**

A \_\_\_\_\_ A

1111 -GAGGGAAACAGCAGCAGGTCCAGGGGAGGCAGATCCCCAGGGTGCTCTCTGAGGTAGAGAAAATTGCCCTTAACCTTGAGGAGTGT  
GluGlyAsnArgGlnGlnValProGlyGluAlaAspProGlnGlyValSerGluValGluLysIleAlaLeuAsnLeuGluGluCys 400

1201 -GCCCTTAGCCCTATCAGCCAGGAGCCAGGAGGCTGAACCGCCCTGTCTCTGTGGCCAGGTGGCTAATGAGGTAAGAAAGCGGAGGAAG  
AlaLeuSerProIleSerGlnGluProArgGluAlaGluProCysProValAlaArgValAlaAsnGluValArgLysArgArgLys 430

1291 -GTGGAGGAAGGGGCTGAGGGTGATGGAGTAGTCAGTAACACTCAAATGCAGGCCAGTGCCCTGCCTCTACCCCTTCAGAGTGTCTCTGAG  
ValGluGluGlyAlaGluGlyAspGlyValValSerAsnThrGlnMetGlnAlaSerAlaLeuProProThrProSerGluCysProGlu 460

1381 -CCCCAAAAGGATGGGAATGGGCCAGAGGACTCAAACAGCCAGGTGGGGCAGAGGATTCCAAAAGCCAGGTGGGGCCGGAGGATCCAAAC  
AlaGlnLysAspGlyAsnGlyProGluAspSerAsnSerGlnValGlyAlaGluAspSerLysSerGlnValGlyProGluAspProAsn 490

1471 -AGCCAGGTGGGGCTGGAGGACCCAAACAGCCAGGTGGGGCCAGAGGACCCAAACAGCCAGGTGGGGCCAGAGGACCCAAACAGCCAGGTG  
SerGlnValGlyLeuGluAspProAsnSerGlnValGlyProGluAspProAsnSerGlnValGlyProGluAspProAsnSerGlnVal 520

1561 -GGGCCAGAGGACCCAAACAGCCAGGTGGGGCCAGAGGACCCAAACAGCCAGGTGGGGCCAGAGCAAGCTGCCCTCTAAGAGCCCTGTG  
GlyProGluAspProAsnSerGlnValGlyProGluAspProAsnSerGlnValGlyProGluGlnAlaAlaSerLysSerProVal 550

1651 -GAGGACCCCTGACTCTGACACTATGGGAACCTCAGTGGATGAGTCAGAGGAGTTGGCAAGGATTGAGGCCCTCTGCTGAACCCCAAGCCT  
GluAspProAspSerAspThrMetGlyThrSerValAspGluSerGluGluLeuAlaArgIleGluAlaSerAlaGluProProLysPro 580

1741 -TAGAGGTGCATCTCAGTCCCTACTCAGCCCACTGCAGGGGGTTTCTGAGTCCAGAGCTCTGCCGTAGGCTCTTCTTGGTGGCCCAAGTGC  
1831 -TGGCCTCTCCCTAGTGGTCACTGAGGTGGCCACAGAGGGACTGAGGCCCTGCCCTCAGGGAAGGCCCAAGGCCCTCAGAACCCCTCCTTAC  
1921 -CTCACTGTGTCTCCTCCACTGCCCTCTGAGCCCTGCGTTGTGATCAGACCCCTAAGGGTCTAGAGGGAGGGGCCCTCTTCAATTAGTCTGGT  
2011 -GCCAAGTGAGGCCCTTTCTGAATAAACTCTTTAGACTTTGTCAAAAAAATAAAAAAATAAAAAAATAAAAAAATAAAAAAATAAAAAA

B \_\_\_\_\_ B

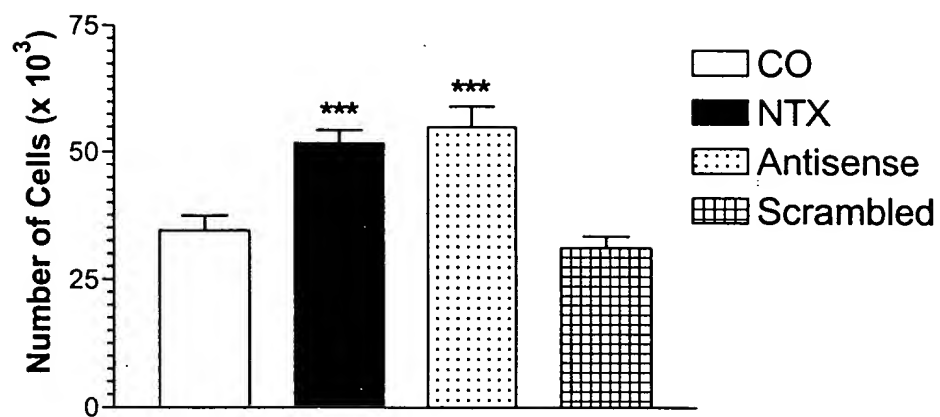
Figure 2B

-150 -TGGGCTCAGCCACGCCAGGTTGCCCGAGCTAGTCTCTTCACTTCTGGCAGCTGCACACATCTGTCACTGAGGGAATGTCAGGTC  
 -60 -TCTCACTCTCCTCTCCTCACTATCCTTTCCGCAGAAAGCGGGTCTCCTCTGTCTGAGTATGGACGACCCGGACTCGGATTCACACCTGG  
 MetAspAspProAspCysAspSerThrTrp 10  
 31 -GAGGAGGAGAGCGAGGAGGATGGCGAGGATGGCCAGGCGGATGATACGACCGATGAGGACACGGCGGACGATGACGGCGACGCGGAGGAG  
 GluGluGluSerGluGluAspGlyGluAspGlyGlnAlaAspAspThrThrAspGluAspThrGlyAspAspAspGlyAspAlaGluGlu 40  
 121 -GCACGGCCCAAGCCTGTTCAGTCCAGGTACACAGGTACCGAAACCTGGCGTGTATGACGAGACATGCAAGATACCGGCACAACATACCCG  
 AlaArgProSerLeuPheGlnSerArgMetThrGlyTyrArgAsnTrpArgAlaMetGlnAspMetGlnArgTyrArgHisAsnTyrPro 70  
 211 -GATTTGACAGATCAAGACTGCAATGGTGACATGTGCAACCTGAGCTTCTACAAAAATGAGATCTGCTTCCAGCCAAAATGGGGCTCTCTCATC  
 AspLeuThrAspGlnAspCysAsnGlyAspMetCysAsnLeuSerPheTyrLysAsnGluIleCysPheGlnProAsnGlyAlaLeuIle 100  
 301 -GAGGACATCTTCAGAACTGGAAAGACAACTATGACCTCTGGAAGAGAATCACTCTACATCCAGTGGCTGTTCTCTCTGGGGAACCA  
 GluAspIleLeuGlnAsnTrpLysAspAsnTyrAspLeuGluGluAsnHisSerTyrIleGlnTrpLeuPheProLeuArgGluPro 130  
 391 -GGAGTGAACCTGGCACGCCCAAGCCCTCACCCCTGAAGGAGGTTGAGGCAATTTAAAGCTCCAAAGGAAGTCAGAGAGCGCTCTTCTCCGGGCC  
 GlyValAsnTrpHisAlaLysProLeuThrLeuLysGluValGluAlaPheLysSerSerLysGluValArgGluArgLeuValArgAla 160  
 481 -TATGAGCTCATGCTGGGCTTCTATGGGTTCACCTGAGGACCGGGCCAGGCTGTATGCCGTGCACAGAACTTCCAGCGCGGCTTC  
 TyrGluLeuMetLeuGlyPheTyrGlyPheHisLeuGluAspArgGlyThrGlyAlaValCysArgAlaGlnAsnPheGlnProArgPhe 190  
 571 -CACAACTCTGAACAGCCACAGCCACAACCAACCTGCGTATTACACGCATCTCAAGTCACCTGGGTGAGCTGGGCTTAGAACTACCAAGGCA  
 HisAsnLeuAsnSerHisSerHisAsnAsnLeuArgIleThrArgIleLeuLysSerLeuGlyGluLeuGlyLeuGluHisTyrGlnAla 220  
 661 -CCCTTGGTCCGCTTCTCTCTGGAGGAGACCCCTGTACAGCACAACTGCCAGCGTCCGACAGTGCCTGGACTACTTCTGTCTGCT  
 ProLeuValArgPhePheLeuGluGluThrLeuValGlnHisLysLeuProSerValArgGlnSerAlaLeuAspTyrPheLeuPheAla 250  
 751 -GTGGCTGCCGGCACCGCGCGGGAGCTTGTGTACTTTGCTGGGAGCACCTCAAGCCTCGCCGAGAGTCTTGTCTGGGGCCCCCGTGAC  
 ValArgCysArgHisGlnArgArgGluLeuValTyrPheAlaTrpGluHisPheLysProArgArgGluPheValTrpGlyProArgAsp 280  
 841 -AAGCTGCGGAGATTCAAGCCCCAGACCATACCCAGCCACTGACGGGACCGAGGAGGAGATGAAGATGAAGGCTCCAGGGACCCCTCC  
 LysLeuArgArgPheLysProGlnThrIleProGlnProLeuThrGlyProGlyGlnAlaAspLysAspGluGlySerArgAspProSer 310  
 931 -AAGAGGCTGGCACCCAGGCTCGGACCTCTGTGATCTCTGGAAGGACCTGAGTGGGGACAGCTGGAACACAGCTGAGGATCCCTCACTGCTGAAC  
 GlnGluAlaGlyThrGlnGlyArgThrCysGlySerGlyArgAspLeuSerGlyAspSerGlyThrAlaGluAspProSerLeuLeuAsn 340  
 1021 -ACAAAGCCCTCAGATGGGGGAACCTTGGATGGGAACACAGAGGATGAAGCTAAGTCCCTGACTCCCAAGGAGACCAAGAAAGCAAGTTG  
 ThrLysProSerAspGlyGlyThrLeuAspGlyAsnGlnArgAspGluAlaLysSerLeuSerProLysGluSerLysLysArgLysLeu 370

**A**

### Figure 2A

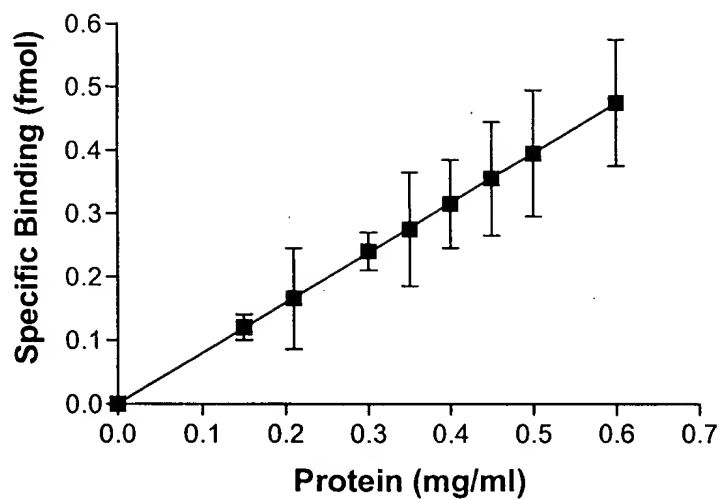
A



**Figure 10**

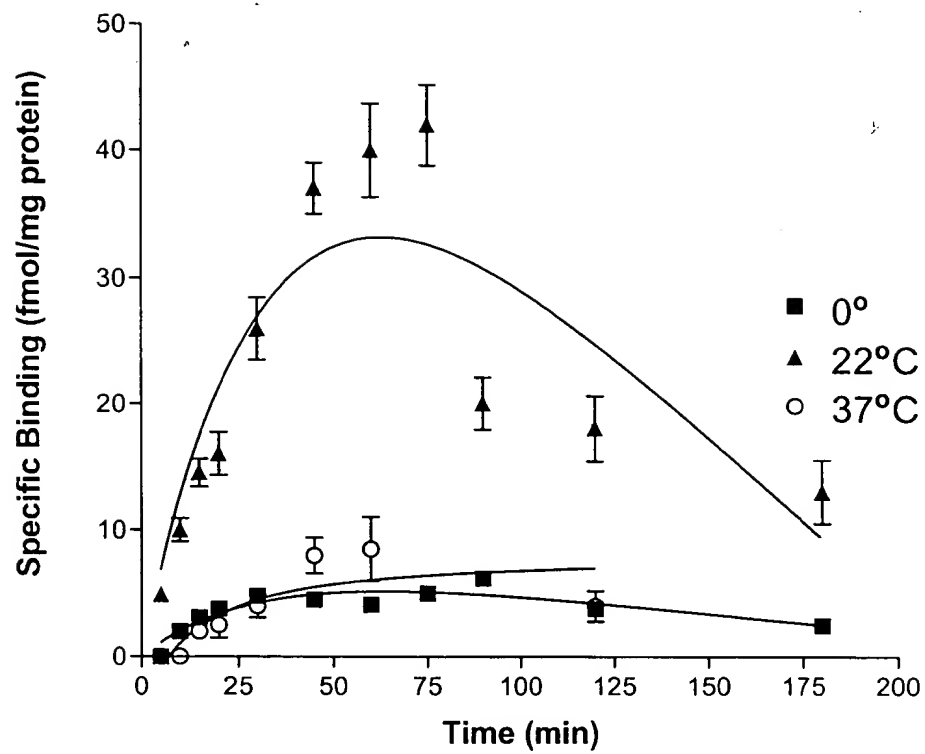
79% Identical/ 87% Similar		39.5% Identical/ 56% Similar		23% Identical/ 47% Similar		20%Identical/ 43% Similar			
1		297		464		629		697	
Amino Acid Number									

**Figure 11**

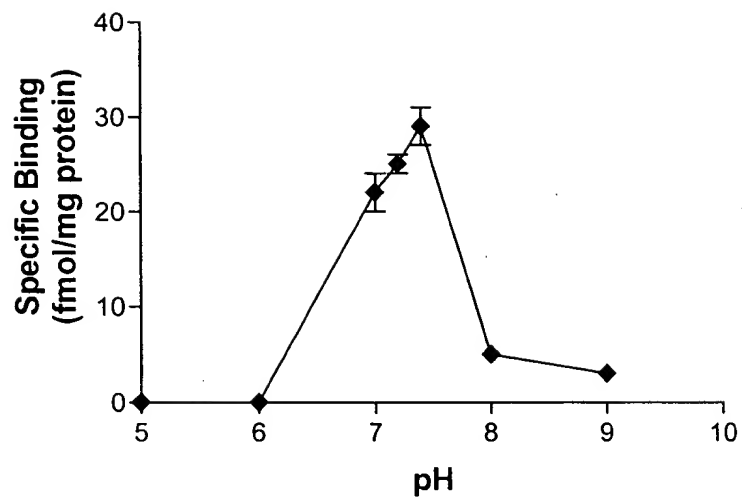


**Figure 12**

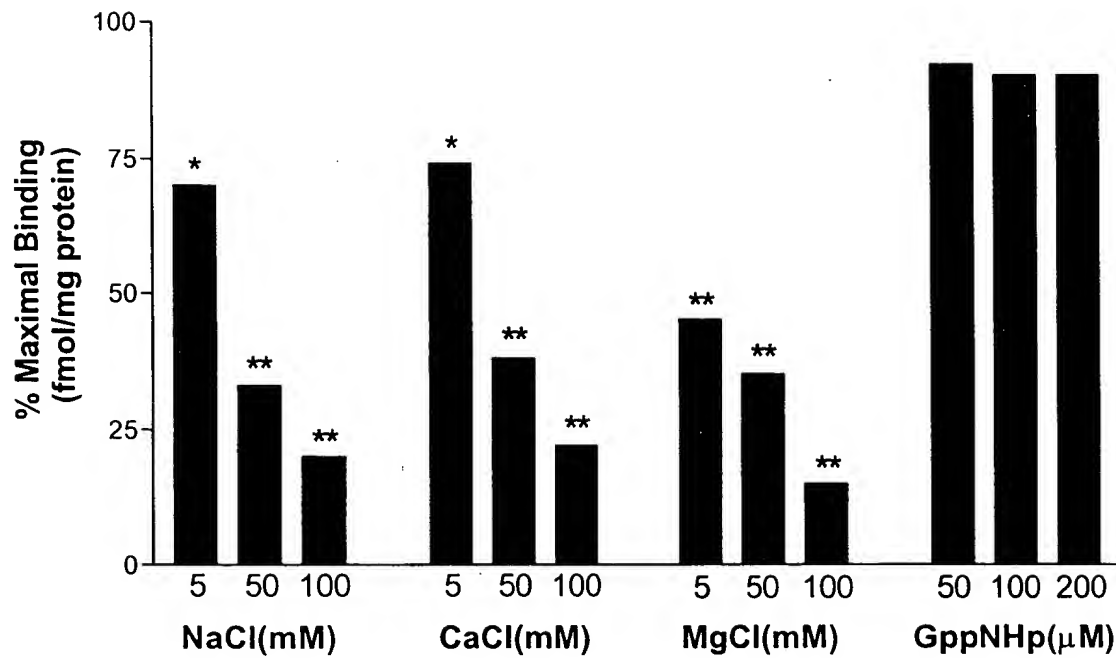




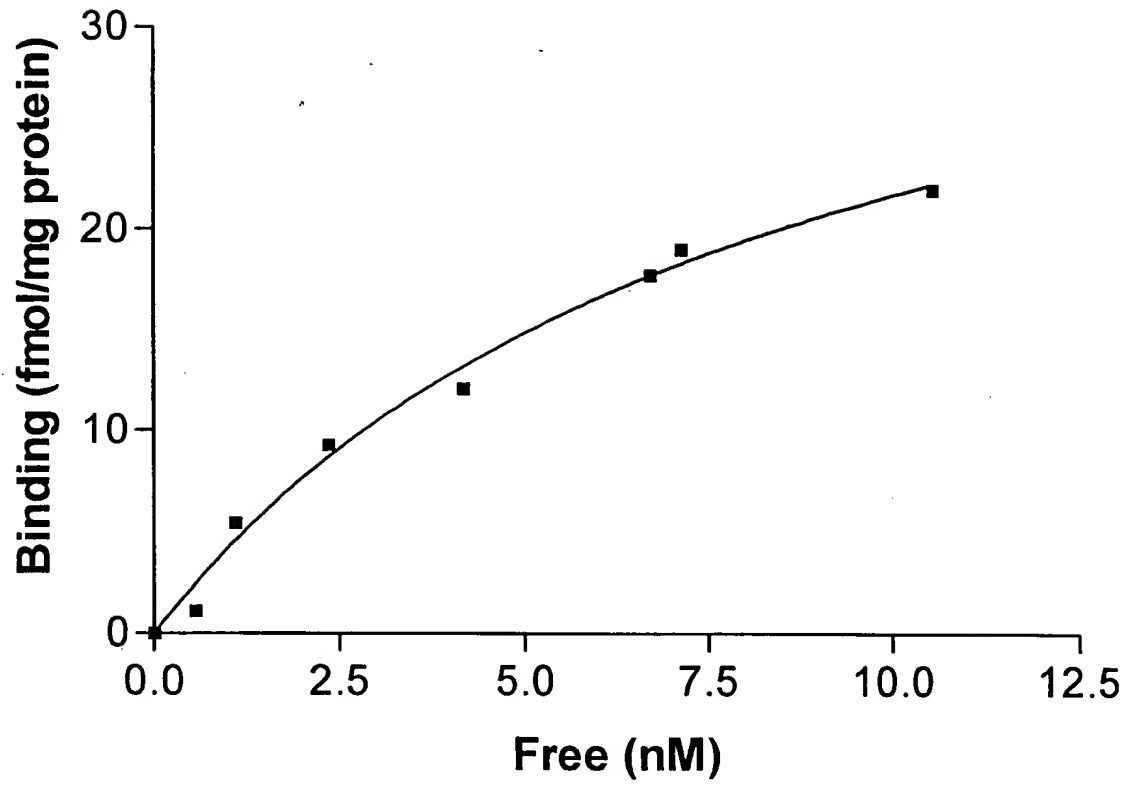
**Figure 13**



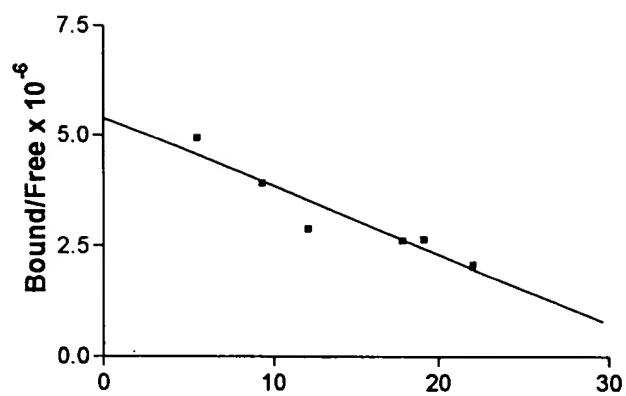
**Figure 14**



**Figure 15**

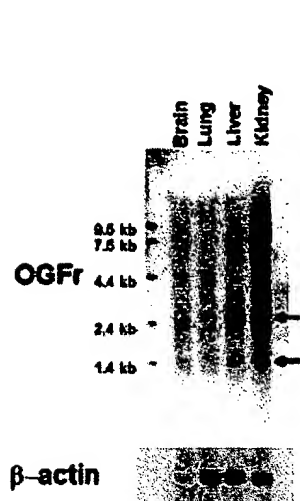


**Figure 16A**

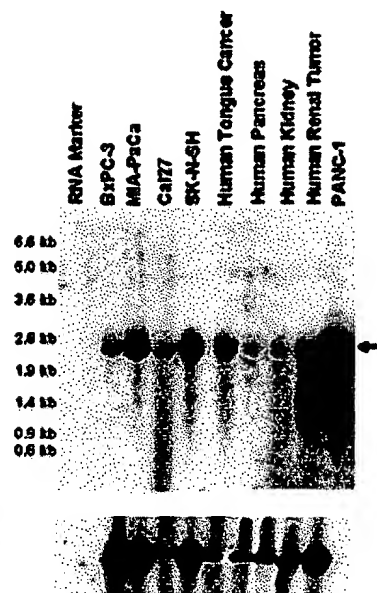
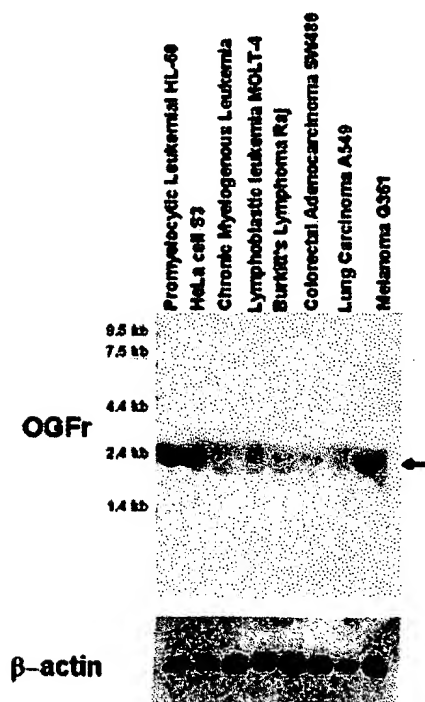
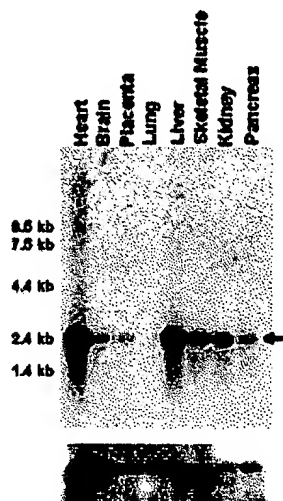


**Figure 16B**

**Figure 9A**

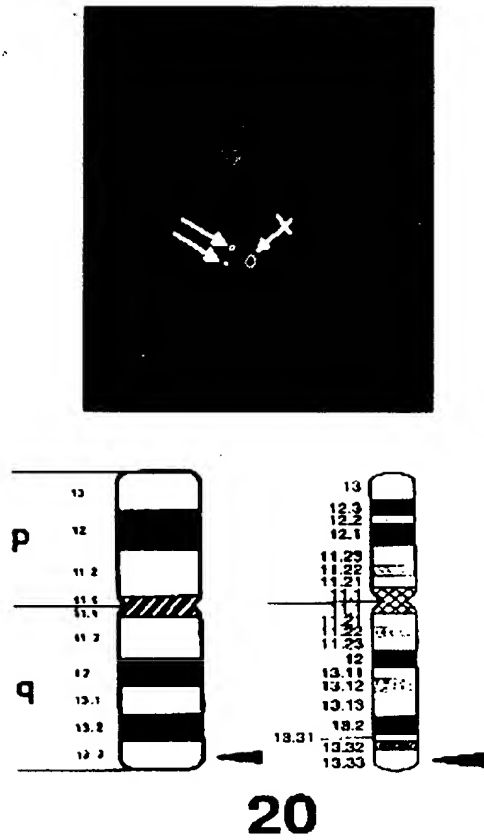


**Figure 9B**

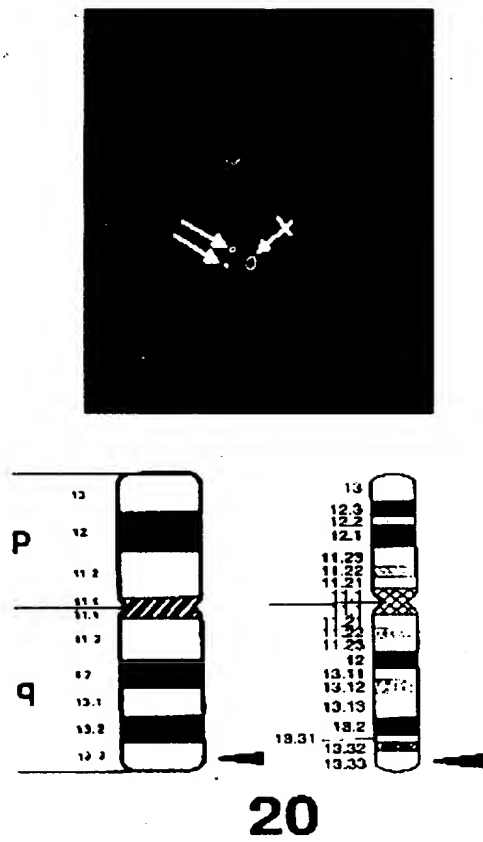


**Figure 9C**

**Figure 9D**

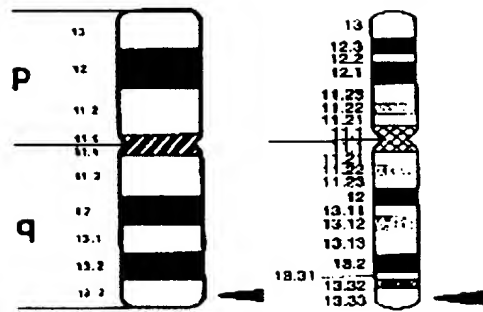


**Figure 8F**



**Figure 8F**





**Figure 8F**

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4 SPSETPGSPSPAGPAGDEPAESPSSETPGPRPA GPAGDEPAESPSSETPGSPSPAGPTRDEPAE...

8 SPSETPGSPSPAGPAGDEPAKTPSETPGSPSPAGPTRDEPAE... 1 2 3 4 5

## Figure 8E



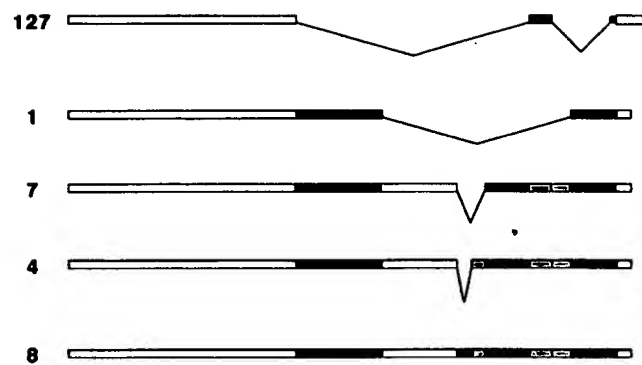
**Figure 8E**

## Replacement Sheet

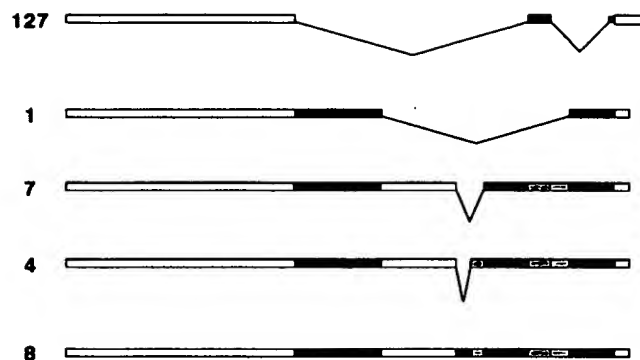
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4	SPSETPGSPSPAGPAGDEPAESPSETPGPPA					GPAGDEPAESPSETPGSPAGPTRDEPAE...
8	SPSETPGSPSPAGPAGDEPAKTPSETPGSPAGPTRDEPAE...	←	←	←		GPAGDEPAESPSETPGSPAGPTRDEPAE...
		1	2	3	4	5



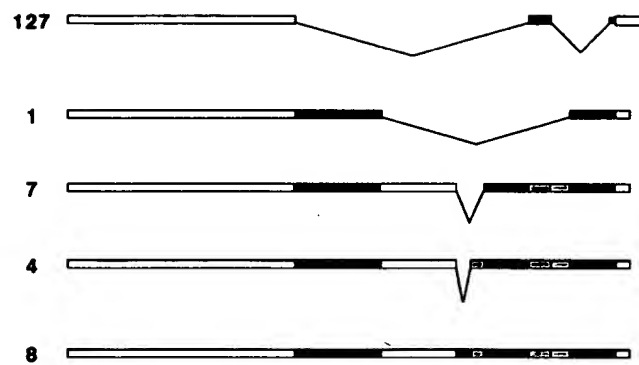
**Figure 8D**



**Figure 8C**



**Figure 8C**



**Figure 8C**